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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/581,602	08/18/2000	Manabu Oumi	S004-4005(PC)	9810
40627	7590	04/19/2007	EXAMINER	
ADAMS & WILKS 17 BATTERY PLACE SUITE 1231 NEW YORK, NY 10004			PSITOS, ARISTOTELIS M	
			ART UNIT	PAPER NUMBER
			2627	
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		04/19/2007	PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No. 09/581,602	Applicant(s) OUMI ET AL.	
	Examiner Aristotelis M. Psitos	Art Unit 2627	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 1/22/07 & 12/11/06.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 36-68 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 36-68 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 January 2007 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Applicants' responses of 1/22/07 and 12/11/06 have been considered with the following results.

Drawings

The newly submitted figures 26 and 27 have been received; however, the drawings are objected to under 37 CFR 1.83(a) because they fail to show either the groove or the optical different refractive indexes as described in the specification. Although these drawings have particular indicia indicated thereon, i.e., 1500 as in fig. 26 there is no clear indication as to what this refers to. The examiner strongly recommends labeling such indicia in both figures. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement-drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the examiner does not accept the changes, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed. Since the invention is drawn to a "near-field" reproduction method and apparatus, the examiner strongly recommends inclusion of such phraseology in the title.

Errata

The examiner makes the following grouping of the claims:

Group A) Claims 36-40 & 53-56: near field reproducing apparatus, designating "only a single linear mark" and "an information field unit"..

Group B) Claims 41-44, & 57-56: near field reproducing apparatus and method, designating "an information unit" and "a plurality of linear marks" in each of these field units.

Group C) Claims 45-52 & 61-68 : near field reproducing method and apparatus, designating "a plurality of information unit fields" each having "a plurality of linear marks" in these fields.

Furthermore: the following additional sub-groups are:

a) claims 53-56, 57-60, 61-64 and 65-68 parallel each other wherein:

- i) 53,57,61,65 define the mark as a projection,
- ii) 54,58,62 and 66 define the mark as a groove,
- iii) 55,59,63, and 67 define the mark as having different optical properties,
- iv) 56, 60, 64 and 68 define the optical property as refractive index.

Claim Objections

Claims:

a) 39, 40; 43,44; 47,48; 51,52; fail to further limit the parent claim. That is defining what the mark represents does not further limit the apparatus.

b) 45 attempts to define two separate functions to a single means, i.e., the light generating means generates and controls the direction of polarization. This contradicts the disclosure.

c) those claims as identified above as sub-group a i) define the mark as a projection fail to further define the apparatus.

d) those claims as identified above as sub-group a ii) define the mark as a groove fail to further define the apparatus.

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e) those claims as identified above as sub-group a iii) and a iv) define the mark as having different optical properties/refractive index. The examiner recommends first defining the record medium as having different optical properties.

f) claims 51,52 refer back to " the at least one linear mark"; however parent claim 49 has no such recitation.

As far as the claims are interpreted the following positions are taken thereto.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.

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3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary.

Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

1. Claims 36-39,54-56 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Guerra ('348)/('507) either further considered with JP 10-112075 and Bricot et al.

The following analysis is made:

Claim 36	Guerra
An information reproducing apparatus:	('348)/ ('507)
	Title/abstract
a light source for generating a linearly polarized light:	in fig. 13, element 160 & 161- see below
a medium having an information unit field and only a single linear mark disposed in the information unit field;	medium is present, see description of figures 21-23
an optical head disposed between the light source and the medium, the optical head having a fine aperture;	element 100 -see below

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a polarized light control means for controlling the	see description of
linearly polarized light generated by the light source to pass	element 161 in fig.
through the fine aperture of the optical head to generate	13 and below
near-field light having a preselected polarization direction	
and to irradiate the linear mark in the information unit filed	
of the medium with the near-	
field light so that the preselected polarization direction of	
the near-field light is orthogonal to a longitudinal axis of	
the linear mark; and	
a detector for detecting light scattered by the	detector elements
linear mark irradiated with the near-field light.	140 in fig. 13.

In the above analysis either of the Guerra systems disclose a near-field system. The system has the basic elements required for reproduction, a light source, appropriate phase controlling element, medium and appropriate detector element. Applicants' attention is drawn to the description of figure 13 for instance, starting at col. 7 line 20 for instance.

Since the system is described as "near-field" the examiner interprets the optical head as having a fine aperture.

With respect to the controlling element/polarized light control means, element 161 is so interpreted as providing the appropriate orientation to the polarization of the light beam used in the system – see the above noted passages. With respect to the claimed axial orientation, such axial orientation is interpreted to element 234 in figures 21 and 23.

With respect to the limitations of claims 37 and 38 such elements are considered inherently present, else no information can be so detected/reproduced.

With respect to claim 39, the mark in either Guerra system is interpreted as a "data mark".

With respect to claim 54, the mark is depicted as a groove – see fig. 15.

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With respect to claims 55-56, the mark has such properties – see figs. 21 & 23 and their description.

If applicants' can convince the examiner that the above Guerra systems do not have

a) the linear polarized light – then the examiner relies upon the JP 10-112075 document – see the MAT (machine assisted translation thereof) with respect to element 27 as described in paragraphs 38-45 thereof.

It would have been obvious to modify the base system of either Guerra with the above teaching from JP 10-112075, motivation is to select the appropriate polarization orientation for the record medium as discussed in Guerra with respect to appropriate materials for the recording marks.

b) If applicants can convince the examiner that either Guerra lacks the appropriate polarized light controller element, the examiner relies upon the Bricot et al reference, see the description of appropriate elements in order to control the polarization orientation of the final beam as it strikes the record medium – see starting at col. 4 line 66, either the quarter or half wave plate which can be substituted by a polarizer. The Bricot et al reference, teaches in this environment the polarization rotation.

It would have been obvious to modify the base system of either Guerra/JP 10-112075 with the above noted teachings from Bricot et al; motivation is to provide for the desired polarization orientation as desired.

Response to Arguments

Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

2. Claims 40 and 53 are is rejected under 35 U.S.C. 103(a) as being unpatentable over the art as applied to claim 36 as stated in paragraph 1 above, and further in view of Guerra ('940) and further with either Lemelson or Morisawa et al.

Guerra ('940) discusses with respect to figure 25 for instance the ability of having a particular sync mark – 211.

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It would have been obvious to modify the base system of Guerra with the additional teaching of having a sync mark for the inherent capability thereof.

Furthermore, Lemelson – see figure 7, where the linear mark(s) are 78', 78 or 79, and the information unit field is each track 77. Hence only one linear mark is so disposed.

Alternatively, Morisawa et al – see the single mark(s) along the left hand edge of figure 5, wherein the unit image field is that area of the record associated therewith.

The capability/concept of having only a single linear mark is well known in the recording arts, i.e., commonly known as alignment marks, synch marks, edge marks, and are disposed with a unit information field.

With respect to claim 53, see the additional teaching from Guerra ('940) starting at col. 14, line 15. Either projections/bumps or pits for the recording mark is a function of the record medium material and hence merely a selection of obvious equivalents.

Response to Arguments

Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

3. Claims 41-43, 58-60 are rejected under 35 U.S.C. 103(a) as being unpatentable over Guerra ('348)/('507) either further considered with EP 0552887 and JP 10-112075 and Bricot et al.

The combination of either Guerra with the JP 10-112075 and Bricot et al reference is relied upon for the reasons stated above in paragraph 1. Note this is a combination of references, and the 102 rejection of relying upon the Guerra reference(s) is not present with respect to these claims because claim 41 differs from independent claim 36 in that it designates/defines an information unit field with a plurality of linear marks disposed in the information unit field.

The EP 0552887 – which in figure 1 shows a plurality of linear marks in the data area/field, i.e., 7(Pb, Pa, Pc), note the different directional orientation of these marks.

It would have been obvious to modify the references as indicated above in paragraph 1 with this additional teaching. Whether the linear mark is a single mark or a plurality of marks is considered to be

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obvious variations over one another, especially because the use/ability of providing a plurality of such marks is known in this environment. Use of such variations (plural marks) provides for identification of more information.

Response to Arguments

Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

4. Claims 44 and 57 are rejected under 35 U.S.C. 103(a) as being unpatentable over the art as applied to claim 41 as stated in paragraph 3 above, and further in view of Guerra ('940) and further with Morisawa et al.

Guerra ('940) discusses with respect to figure 25 for instance the ability of having a particular sync mark – 211, which is interpreted as the linear tracking mark(s).

It would have been obvious to modify the base system of Guerra with the additional teaching of having a sync mark for the inherent capability thereof.

Alternatively, Morisawa et al – see the single mark(s) along the left hand edge of figure 5, wherein the unit image field is that area of the record associated therewith.

The capability/concept of having a plurality of linear mark is well known in the recording arts, i.e., commonly known as alignment marks, synch marks, edge marks, and are disposed with a unit information field – see above to either Guerra, ('940)/Morisawa et al.

Response to Arguments

Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

5. Claims 45-47, 62-64, 49-51, 66-68 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Guerra ('348)/('507) either further considered with JP 10-112075 and Bricot et al.

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The references are relied upon for the reasons stated above in paragraph 1.

Claim 45 differs from claim 36 in that it designates/recites a plurality of information unit fields each having a plurality of linear marks therein.

Under 102 considerations, either Guerra reference ('348)/('507) depicts such – see either figure 1 marks 21, 23, or alternatively figures 14, 16, 17, 20 or 22.

If applicants can convince the examiner that such are not a plurality of unit information fields, then the examiner further relies upon JP 10-112075 as teaching such – such an interpretation is keeping in line with applicants interpretation in his remarks on page 16 of the above dated response.

It would have been obvious to modify the base system of either Guerra with such an additional teaching, motivation is to provide for a plurality of information fields indicative of information. This is considered merely a difference in the amount of information units provided on a record medium.

The analysis of the method claims is similar, i.e., the method limitations are met when the above system/systems operate.

Response to Arguments

Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

6. Claims 48, 61, 52 and 65 are rejected under 35 U.S.C. 103(a) as being unpatentable over the art as applied to claims 45 and 49 as stated in paragraph 3 above, and further in view of Guerra ('940) and further with Morisawa et al.

Guerra ('940) discusses with respect to figure 25 for instance the ability of having a particular sync mark – 211, which is interpreted as the linear tracking mark(s).

It would have been obvious to modify the base system of Guerra with the additional teaching of having at least a sync mark for the inherent capability thereof.

Alternatively, Morisawa et al – see the single mark(s) along the left hand edge of figure 5, wherein the unit image field is that area of the record associated therewith.

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The capability/concept of having a plurality of linear mark is well known in the recording arts, i.e., commonly known as alignment marks, synch marks, edge marks, and are disposed with a unit information field – see above to either Guerra, ('940)/Morisawa et al.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aristotelis M. Psitos whose telephone number is (571) 272-7594. The examiner can normally be reached on M-F: 6:00 - 2:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dwayne D. Bost can be reached on (571) 272-7023. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Aristotelis M Psitos
Primary Examiner
Art Unit 2627



AMP



1500

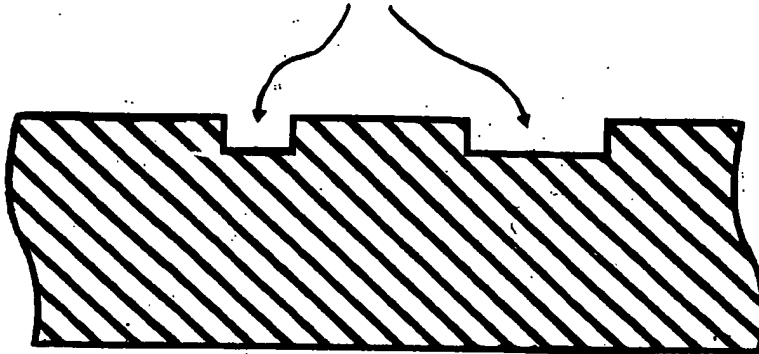


FIG. 26

1600

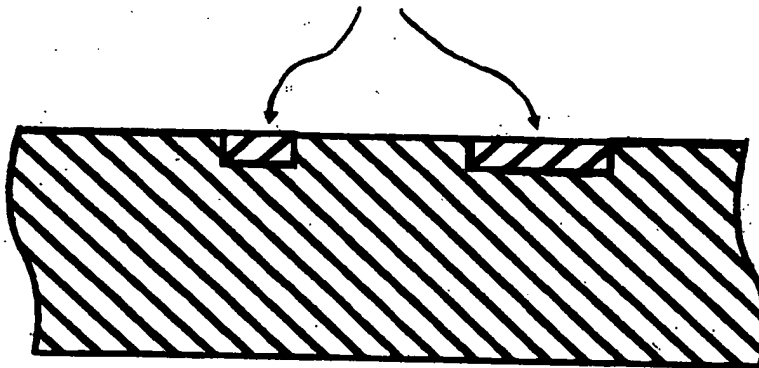


FIG. 27

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